UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

NOV 20 2006

Mr. Dan Eden, Deputy Director
Office of Permitting, Remediation and Registration (MC-122)
Texas Commission on Environmental Quality (TCEQ)
P.O. Box 13087
Austin, TX 78711-3087

RE: Site-specific copper standards for the unnamed tributary to Hart Creek and Hart Creek (unclassified water bodies in Segment 0404 of the Cypress Creek Basin)

Dear Mr. Eden: Dan

The Environmental Protection Agency (EPA) has completed its review of the request for site-specific freshwater copper criteria, which was submitted to EPA for review and approval, as required by 40 CFR §131.20. The site-specific criteria apply to a portion of the unnamed tributary to Hart Creek, as well as a portion of Hart Creek. The unnamed tributary to Hart Creek is an unclassified, intermittent stream with no significant aquatic life uses. The unnamed tributary to Hart Creek flows into Hart Creek which is an unclassified, perennial stream with a designated high aquatic life use. EPA guidance allows states to develop site-specific criteria for waters for which default water quality criteria may not be appropriate.

The City of Mount Pleasant wastewater treatment plant (WWTP) (TPDES # 10575-004), discharges treated domestic wastewater to an unnamed tributary of Hart Creek, thence to Hart Creek, thence to Segment 0404-Big Cypress Creek below Lake Bob Sandlin in Titus County. Due to the water quality characteristics of the discharge from the City of Mount Pleasant WWTP, a water effect ratio (WER) study was performed (using laboratory water and 18% effluent in the simulated downstream water) to determine if site-specific water quality criteria for copper would be more appropriate than the state-wide copper criteria.

Our review of the WER study indicates that the State of Texas' freshwater acute and chronic water quality criteria for copper may be adjusted to account for site-specific physical and chemical interactions, which mitigate the toxicity of copper to freshwater organisms. The methodology used to determine the site-specific criteria is consistent with EPA's WER guidance for metals (*Interim Guidance on Determination and Use of Water-Effect Ratios for* Metals, EPA 823-B94-001 and *Streamlined Water-Effect Ratio Procedure for Discharges of* Copper, EPA 822-R-01-005) and with the previously-approved WER provision in §307.6(c)(9) of the Texas Water Quality Standards (TX WQS) [*Texas Surface Water Quality Standards*, adopted July 26, 2000]. From the study, a final WER of 7.1595 was calculated from the geometric mean of two individual WERs derived from toxicity tests conducted on *Ceriodaphnia dubia.*

Because EPA has not completed review of the new and revised standards in Table 1 of the 2000 TX WQS, the freshwater copper criteria in the 1997 TX WQS are currently effective for CWA purposes. Based on the WER study, the 1997 TX WQS criteria for copper, the default segment hardness value of 38 mg/L, and the resulting WER of 7.1595, site-specific freshwater acute (55.22 μg/L) and chronic (40.07 μg/L) water quality criteria have been demonstrated as appropriate to protect aquatic life.

The Endangered Species Act §7 states that "all Federal agencies shall...utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered and threatened species" and "each Federal agency shall insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species." EPA has determined that approval of the site-specific copper criteria for a portion of the unnamed tributary to Hart Creek and a portion of Hart Creek will have no effect upon federally-listed threatened and endangered species.

The site-specific criteria discussed herein only apply within the discharge mixing zone for this facility and will be incorporated into Appendix E of the TX WQS at the time of the next triennial revision. The statewide criteria in Table 1 of the 1997 TXWQS apply to the remaining parts of the unnamed tributary to Hart Creek and Hart Creek. For CWA purposes, the WER of 7.1595 may also be multiplied by the statewide copper criteria in Table 1 of the 2000 TX WQS to establish site-specific criteria since the statewide copper criteria in the 2000 TX WQS are more stringent than in the 1997 TX WQS. The aquatic life uses previously described above for the unnamed tributary to Hart Creek and for Hart Creek have not been revised.

If you should have any questions, please call me at (214) 665-7101 or have your staff call Nelly Smith at (214) 665-7109.

Sincerely yours,

Miguel I. Flores
Director
Water Quality Protection Division

cc: Michael Pfeil, TCEQ - Water Quality Assessment Section (MC-150)